

[METHOD FOR DETERMINING SONDE ERROR FOR AN INDUCTION OR PROPAGATION TOOL WITH TRANSVERSE OR TRI-AXIAL ARRAYS]

Abstract

A method for determining a sonde error in a logging tool comprising a transverse array includes obtaining a first measurement using the transverse array while the logging tool is at a first height from ground in a selected orientation; obtaining a second measurement using the transverse array while the logging tool is at a second height from the ground in the selected orientation; deriving a difference measurement from the first measurement and the second measurement; determining a background signal using the difference measurement and a predetermined function, wherein the predetermined function relates earth signals in a plurality of signals obtained at the second height to a plurality of difference signals between signals obtained at the first height and the second height at a plurality of formation conductivities; and determining the sonde error by subtracting the background signal

from the second measurement.